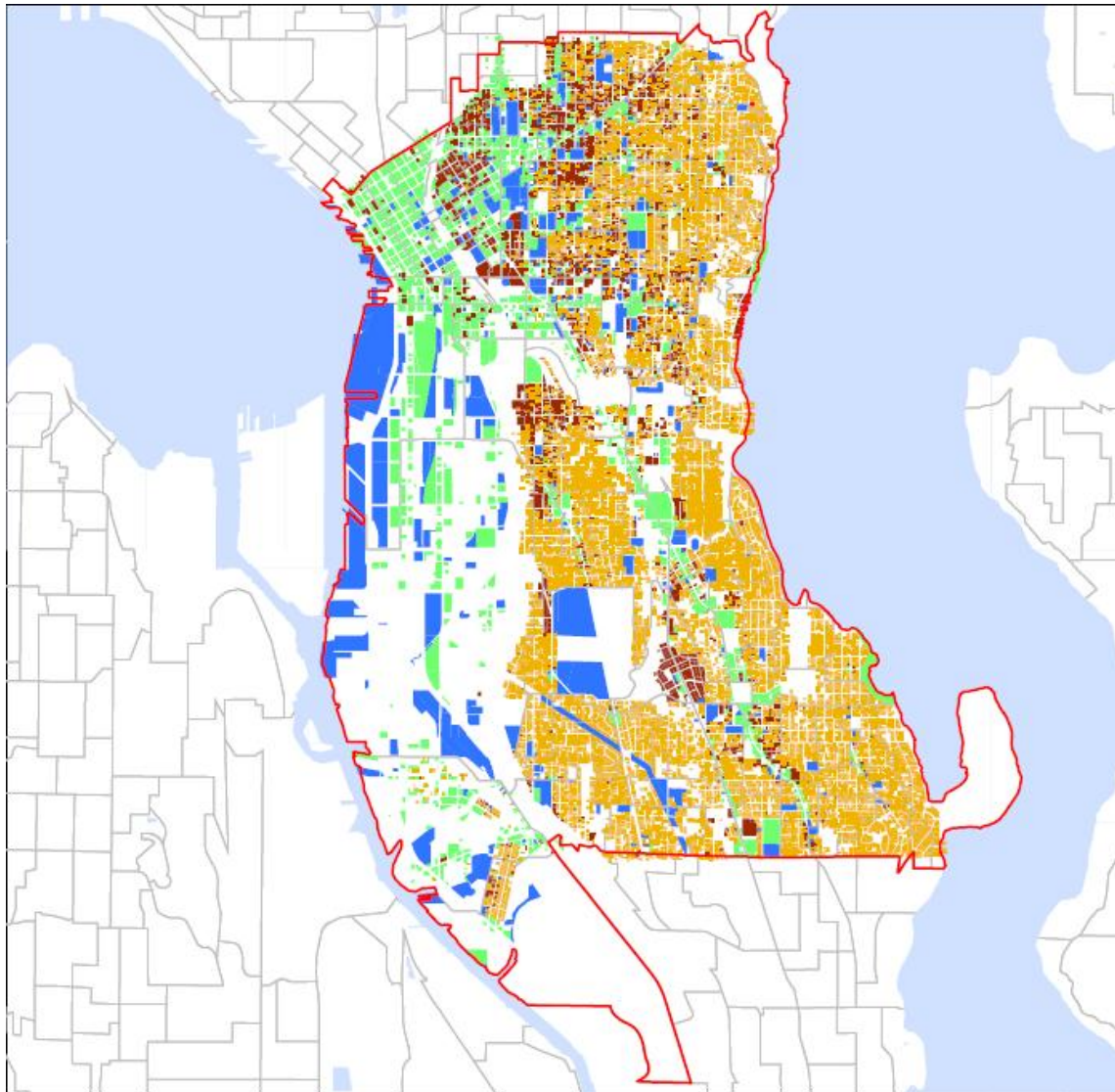


Geographic Focus Area of Seattle's Neighborhood Web Initiative



	BUILDING SECTOR
	Single-Family Residential
	Multi-Family Residential
	Small Commercial
	Large Commercial
	Hospitals
	Municipal Facilities

1. PROJECT OBJECTIVES

1.1

GOALS AND OBJECTIVES

The City of Seattle is pleased to submit this application to the Department of Energy for \$25 million to fund **Seattle's Neighborhood WEB (Weatherize Every Building) Energy Efficiency Retrofit Ramp-up** initiative. Joining our submittal, over 40 public, private, and nonprofit partners bring \$175 million in leverage and supporting programs, for a 7:1 leverage ratio. Together, we are committed to the **twin goals** of 1) drastically reducing carbon emissions by fostering a clean energy economy that relies on energy efficiency as a primary "source" of power and 2) putting Americans to work in family-wage green jobs weatherizing and retrofitting the buildings where we all live and work.

Our WEB initiative takes a neighborhood and building-by-building approach to achieving energy efficiency by engaging all residents, businesses, and buildings in this historic effort—diverse communities, young and old, rich and poor, homeowners and renters, workers and business owners. To accomplish this goal, we have designed a program in which virtually everyone in our targeted district will become aware of and involved in reducing energy use and associated emissions. With the critical support of funds from this grant, within three years, we will achieve a market penetration of more than 30% for energy efficiency in our targeted markets—paving the way for up to an 80% market share within a decade as well as the rapid growth and adoption of efficiency services and practices throughout the rest of Seattle and among the 5 million people in the broader region of western Washington and beyond.

To achieve these ambitious outcomes for powering efficiency, slashing carbon, and generating jobs, we have identified **five key objectives** for the WEB initiative. We have designed our effort to achieve these objectives in the next three years and to build on and expand their impact in subsequent years.

1. **Boost our economy and environment immediately by using the EECBG funds to achieve major energy savings and create 2,000 new living-wage green jobs**—the retrofits are targeted to cost-effectively reduce energy use by 15 to 45% and cut 71,000 metric tons of CO₂e emissions.
2. **Provide communities around the region and nation with a model they can adopt, including best practices to overcome the key barriers of access to information, financing, and skilled workers.** Seattle's experience with energy conservation, financing, and workforce development over the last three decades shows that an integrated approach pursued with dedication, flexibility, and vigor will achieve the desired outcomes, though no single "silver bullet" alone will transform the marketplace.
3. **Test and prove the feasibility of innovative, alternative, and game-changing solutions**, as part of building a replicable model. Through WEB, we will implement and hone the following innovations:
 - **Offer public financing for and ownership of energy efficiency improvements** in private buildings using energy efficiency Power Purchase Agreements (eePPA) where improvements pay for themselves.
 - **Deploy credit enhancement mechanisms** to attract private capital into revolving loan funds, leveraging public funds invested at ratios ranging from 3:1 to 12:1.
 - **Create on-bill utility repayment mechanisms** for both residents and businesses through Seattle City Light and ShoreBank Enterprise Cascadia. Utility on-bill repayment offers an effective alternative to PACE financing in the many places like Washington State with constitutional limits on lending of credit.
 - **Securitize energy efficiency loans and arrange for take-out financing** to provide a source of capital to sustain the program after EECBG funds are expended and to provide additional leverage.
 - **Establish a Carbon Incentive Fund**—the first of its kind in the nation—to enable local businesses and utilities to participate in an expected regional or federal cap-and-trade market.
 - **Use web-based programs** to provide residents with low-cost ways to assess energy use and take action.
 - **Test and prove a door-to-door community organizing model** to engage homeowners in learning about and acting on energy efficiency opportunities in their homes.
 - **Create jobs through collaborative partnerships** for workforce development that ensure high-quality training, certification, and access to jobs for entry-level to highly skilled workers.

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

4. **Maximize the leverage of federal funds, providing the public with a superior return on its investment.** We expect to achieve a **7:1 leverage of EECBG funds**, with \$15 million provided through existing programs and \$160 million leveraged through new funds that the grant will enable.
5. **Establish a conservation program and financing facility that is durable and sustainable over time**—continuing long after the EECBG funds have been used. The DOE funds will enable Seattle to build on the results it has already achieved and launch a breakthrough program that quickly achieves critical mass, fostering both ongoing sustainability and rapid market transformation.

1.2 OVERVIEW OF WORK PLAN FOR ACHIEVING SUCCESS

Seattle's Office of Sustainability and Environment will manage the project, with its Director, a cabinet-level position, serving as Principal Investigator. *Washington State University's Energy Program* will play a key role as a technical advisor throughout the project and the Monitoring and Verification leader. The WEB initiative will be implemented in close partnership with the two energy utilities: *Seattle City Light* (SCL), a City-owned electricity provider; and *Puget Sound Energy*, an investor-owned utility providing natural gas (and electricity outside Seattle). Private and nonprofit partners will deliver retrofit services, under contract to the City. Partners—from *McKinstry* and *ShoreBank* to *Earth Advantage* and many more—bring a wealth of expertise, experience, and tools to the program.

We have established 1) a clear work plan with concrete milestones and measurable results; 2) a highly skilled management team bringing in expertise from technical and policy advisory teams; 3) delivery mechanisms that build on extensive experience and program commitments to accelerate conservation and return on investment; and 4) methods to capture lessons learned, so our successes can be shared with local governments in the Northwest and elsewhere. With our talented partners, effective project management structure, and sensible work plan described in this proposal, we are confident Seattle can successfully achieve our ambitious objectives and goals.

2. MERIT REVIEW CRITERIA DISCUSSION

In the *Merit Review* section, we begin with our *Project Approach* (Criterion 3) for Seattle's WEB initiative. Next, we describe the *Partnership Structure and Capabilities* (Criterion 4) we will employ to complete our approach successfully. In *Leveraging and Sustainability* (Criterion 1), we explain how our project approach and partnerships will leverage the grant funds and sustain our success well beyond the three-year grant. Finally, we summarize the WEB initiative's *Project Impact* (Criterion 2) on energy savings, emissions avoided, and market transformation in, around, and well beyond the Seattle area.







2.1 PROJECT APPROACH (CRITERION 3)


The WEB initiative uses an intensive neighborhood-based approach to identify, finance, deliver, and monitor energy efficiency retrofits in eligible buildings within the targeted district. Figure 1 shows the target for initial deployment during the three-year grant period. The initiative retrofits single-family homes as its primary focus, and it also includes retrofit efforts for multifamily, small business, large commercial, hospital/institutional, and City facilities for a holistic energy efficiency focus. Table 1 details the building types that the initiative seeks to retrofit during the grant period, based on a target of 25% of units built before building energy performance standards were adopted in 1982.


To achieve the program's core objectives, the WEB initiative focuses on the heart of Seattle (see map), the city's most culturally and economically diverse community stretching from the downtown core and the hospitals of "Pill Hill" to Rainier Valley and the shores of Lake Washington. This community is home to 55,000 residents, and the initiative targets more than 22,000 households in single-family homes, apartments, and condos. To deliver the greatest impact and yield valuable lessons to share, we chose a demographically diverse district (56% white, 19% black/African-American, 17% Asian, 5% Hispanic/Latino, 1% American Indian/Alaska Native, 0.35% Hawaiian/Pacific Islander, and 2% other) and where 60% of residents fall below the Seattle average median income.


Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change


Table 1. Building Sectors Represented in Targeted Central Seattle District


SECTOR	Total Buildings	Targeted Buildings	Total Targeted Sq. Feet (SF)	Average Sq. Feet	Retrofit Target	Percent Retrofit
 Single-Family Residential	19,000	17,000	34,000,000	2,000	3,315	20%
 Multifamily Residential	4,500	270	4,050,000	15,000	87	32%
 Small Commercial	385	385	1,925,000	5,000	146	40%
 Large Commercial	129	129	12,900,000	100,000	27	21%
 Hospitals	4	4	4,000,000	1,000,000	4	100%
 Municipal Facilities	14	14	2,150,000	150,000	14	100%


 **Single-Family Residential.** This component relies on multiple entry points, including technology solutions and community engagement approaches, to motivate investment in energy efficiency audits and at least 3,300 retrofits in the targeted district. It will pilot three innovative financing mechanisms: a residential energy efficiency revolving loan program and an energy efficiency service charge, both repaid on the utility bill and replenished by accessing the secondary market to ensure sustainability, as well as a residential Carbon Incentive Fund. It also will capture the value and monitor performance of investments through the Energy Performance Score rating and label.

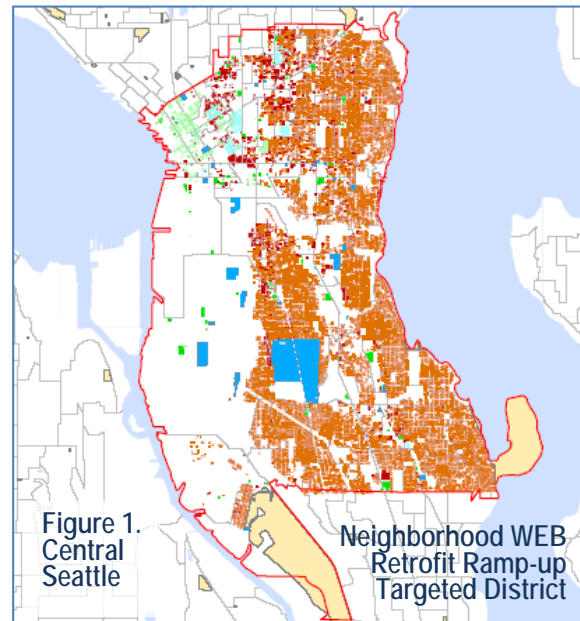
 **Multifamily Residential.** The multifamily approach builds on an existing utility-delivered program through targeted marketing to buildings of 20+ units, offering audits, Energy Star Portfolio Manager energy benchmarking analysis, direct installation of measures in common areas, and piloting a carbon incentive fund and energy efficiency service charge for financing deep energy retrofits through shared investment between owners and tenants.

 **Small Commercial.** Grocery stores and cold-storage facilities are the biggest users of electricity per square foot of any business sector due to high demands for lighting and refrigeration. The WEB initiative will initially target these businesses and expand over time to reach other high-intensity users. We have identified 28 such facilities in the targeted district that can realize immediate energy savings from replacement of lighting, HVAC, and refrigeration fixtures. We will target 100% of this sector and then expand to other areas of the city. In addition, we will engage over 100 small corner stores and restaurants with limited access to capital but ample opportunities for efficiency upgrades.

 **Large Commercial: Seattle Steam Customers.** The WEB initiative will expand existing on-bill financing offered by Seattle Steam, a private district energy utility serving 200 buildings in and near downtown. Through a partnership with MacDonald-Miller, Seattle Steam will offer long-term financing of retrofits, leveraging private capital at a ratio of up to 11:1. This effort will finance a minimum of 25 retrofits during the grant period, each with a payback of 3-4 years.

 **Institutional: Hospitals.** There are 4 hospital facilities in the targeted district. In the healthcare industry, lack of long-term sustainability planning and insufficient funding to carry out sustainability initiatives limit the adoption of efficient practices. The WEB initiative will create a *Healthcare Carbon Incentive Fund* providing hospitals a lump sum payment to support efficiency investments, leveraged roughly 8:1 to 10:1 to achieve the desired carbon reduction.

 **Municipal Facilities.** In partnership with *McKinstry*, the City's ESCO, audits of City of Seattle facilities were funded in 2009 using the City's EECBG formula funds, with a commitment to finance retrofits identified through a municipal bond sale. The City will use EECBG competitive funds to identify deeper retrofit opportunities and to "buy down" program costs so that 14 projects in the targeted area may be financed through a 12-year municipal bond measure.



2.1.1 KEY ELEMENTS AND SOUNDNESS OF MANAGEMENT STRATEGY

The City of Seattle and its partners have developed a carefully considered and comprehensive **project management** strategy. The City and its partner utilities and technical advisors from Washington State University's Energy Office bring decades of experience with delivering successful efficiency programs. In 2008, Seattle and its partners delivered \$ 136 M in conservation programs creating a 321,564 MWh conservation "power plant." Under Seattle's leadership, the core team has assembled a systematic approach to managing and overseeing multiple audit, retrofit, financing, and verification efforts across six major market sectors. As discussed under *Criterion 4*, our robust team brings the track record and skills to deliver deep efficiency gains on an ambitious timeline, and we have prepared a robust management strategy for successful on-time completion while leveraging extensive resources beyond the grant funds.

The remainder of this section summarizes our overall strategies across the six sectors for **outreach and marketing** and **funding**. We have tailored our **implementation/delivery plans** to each of the six targeted audiences and building types. We conclude this section with summaries of our overall approach to **monitoring and verification**, and **feedback and continuous improvement**.

Outreach/Marketing Strategy

To ensure that key messages reach their intended audiences and help move them to change behavior and invest in energy efficiency, our outreach and marketing strategy for the WEB initiative will be based on proven principles and practices of community-based social marketing. Methods to reach target audiences include using earned media, utility bill inserts, web-based approaches, direct mail, community events, door-to-door canvassing, and more. The majority of the outreach and marketing will focus on the residential sector; we will use additional targeted outreach and marketing strategies to promote change in the non-residential sectors.

On the **Residential** side, the City's community engagement campaign, *Seattle Climate Action Now* (CAN), is launching a "**One Ton Challenge**," which calls on residents to calculate and then reduce their annual carbon footprints by 1 ton. The home retrofit campaign offers some of the best potential for savings, and the One Ton Challenge will link residents directly to retrofit opportunities. For multifamily housing, the existing partnership between Seattle City Light and Puget Sound Energy, will conduct an educational campaign. This effort will include direct mail and workshops for property owners, managers, homeowners' associations, and tenants. The multifamily campaign will start with the 270 properties with 20+ units before expanding to ultimately reach 1,600 multifamily buildings.

For **Non-Residential** properties, Seattle's Office of Economic Development (OED) and its partners will target grocery, cold storage, and restaurant businesses that can realize immediate energy savings from replacement of lighting, HVAC and refrigeration fixtures. The Grow America Fund and ShoreBank Enterprise Cascadia, the fund managers for the commercial energy efficiency loan program, will draw on their existing relationships with many of these store owners to promote the retrofit program. Through its partnership with Unified Grocers, the largest trade organization for Seattle-area independent grocery stores, the City will reach out to grocery stores for participation. ShoreBank will focus on outreach and assistance to small markets and restaurants owned by immigrants and minority owners in low-income neighborhoods. For the larger commercial and institutional properties, the City and its utility and ESCO partners will conduct direct and tailored outreach, working with each facility to identify the best opportunities to maximize energy and cost savings.

Funding Structure

Despite the presence of incentives, tax credits and rebates to buy down project costs, individual building owners still need to make significant investments to secure efficiency upgrades. To date, financial institutions have been reluctant to lend resources for energy efficiency retrofits, due in part to the relatively small size of these loans as well as a lack of confidence in outcomes. To fill this gap, the City and its financing partners have developed a package of retrofit financing options to meet customers' needs paired with credit enhancement programs to attract new lenders.

The WEB initiative will establish **Carbon Incentive Funds** (CIF) to support energy retrofits in the residential, small commercial, and hospital sectors. The CIFs will make a total of nearly \$10 million available through a competitive process for organizations that can deliver measurable carbon reductions. Organizations able to leverage additional,

private resources as well as aggregate, neighborhood-wide coverage will be the most competitive in securing incentive funds. The City will follow standard offset project protocols to establish a methodology in which funds are awarded per ton of carbon reduced, calculated over the life of the project.

Residential financing options include on-bill repayment approaches and a program for low-income residents:

- **An Energy Efficiency Service Charge (EESC)**, a direct version of the energy efficiency Power Purchase Agreement (eePPA) model, will finance retrofits in approximately 800 houses with electric heating. The City will purchase, install, and monitor retrofits and enter into long-term contracts with owners (or renters) to pay monthly service charges for the upgrades, equal to the savings achieved. This tool will also extend to residents of the estimated 85% of multifamily buildings with electric heat. Among the 270 buildings targeted, we plan to finance deep efficiency upgrades in about 35 buildings. Because this model does not involve property liens or loans, it may be more attractive to property owners with credit issues. It may also facilitate upgrades in renter-occupied units—as the relationship is with the bill payer, not owner.
- **The Residential Energy Efficiency Revolving Loan Program** was created through EECBG formula funds and will be expanded through the WEB initiative to deliver loans to 2,400 gas- or oil-heated homes in the targeted district. Loans will range from \$2,500 to \$12,500 to pay for efficiency upgrades based on an Energy Performance Score audits. These loans will target 30% energy savings per home, averaging 4,000 kWh in annual reduction.
- **On-Bill Repayment.** Both the revolving loan program and the EESC rely on utility bill repayment on the customer's SCL electric bill. ShoreBank and SCL are working collaboratively to put this on-bill repayment system in place to service the existing residential loan program, which will launch in April 2010.
- **Coordination with Low-Income Weatherization Program.** HomeWise will offer weatherization grants to low-income renters and homeowners at or below 200% of the federal poverty level.

On the **Non-Residential** financing side, the WEB initiative will offer new energy efficiency loan products tailored for different business sizes. For **restaurants, grocery stores, and convenience stores**, the City has established two loan programs which are designed for “net zero” cost to the borrower when rebates, utility savings, and tax deductions are factored into loan payments. These loan programs will be expanded through the WEB initiative to finance energy system, equipment repair, or replacement costs—such as lighting, HVAC, and refrigeration—identified in an energy audit. Financing options for small businesses will include the following packages:

- **Incentive lending for creditworthy businesses.** Backed by the federal Small Business Administration (SBA), loans with attractive terms are expected to entice businesses to invest in cost-effective efficiency upgrades. This program is managed in partnership with National Development Council's Grow America Fund (GAF).
- **Lending for “higher-risk” business.** This group includes businesses deemed less creditworthy by traditional lending standards as well as “non-traditional” lending clients such as immigrant-owned small grocery stores and restaurants. Most of these businesses are considered unlikely to invest in energy efficiency even with favorable payback periods, due to insufficient financial resources and high interest rates on available loans. ShoreBank Enterprise Cascadia will work with these businesses, providing loans to support borrowers in distressed areas.

For **large commercial and institutional facilities**, the WEB initiative includes:

- **On-bill financing and a new energy efficiency project finance company** created by MacDonald-Miller Facility Solutions (MMFS), an ESCO, will be leveraged to fund additional energy efficiency upgrades in Seattle Steam's district heating territory. Customers will enter into Energy Services Agreements (ESA), and payments will be added to their existing steam utility bills. MMFS will arrange for financial incentive payments from all utilities for resource savings and load management projects.
- **The Hospital Carbon Incentive Fund** will make up to \$75,000 available to each of the 4 hospital facilities in the district as matching funds to develop Strategic Energy Management Plans (SEMPs). It will also provide incentive funding for significant retrofit projects identified in the plans. The payments would require at least a 1:1 match from the hospital, leveraging a total minimum of 8:1 to 10:1 in private investment.

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

- **Bridge financing** will be provided to participating hospitals by McKinstry Capital to cover, when needed, initial project costs in advance of reimbursement of EECBG funds from DOE.

To attract private capital, provide security for investors, and ensure loans to customers at the lowest possible rates, the City will work with Shorebank, NDC, MMFS, and other engaged financial institutions to establish a reserve for loan losses and related credit enhancement purposes.

For its own **municipal** facilities, the City proposes utilizing \$2.5 million in EECBG funds to identify and buy down the incremental cost of deeper energy efficiency retrofits at these 14 sites. Projects identified through these audits will be financed through a municipal bond sale, in the range of \$20-30 million.

Implementation/Delivery Plans

This section describes our plans to implement and deliver energy efficiency retrofits in each of the six targeted sectors in central Seattle: 1) single-family residential; 2) multifamily residential; 3) small commercial; 4) large commercial (district heating customers); 5) hospitals; and 6) City facilities.

Single-Family Residential Energy Efficiency Program

Seattle's residential energy efficiency program for single-family homes envisions a stepwise process where homeowners 1) receive information; 2) make decisions to pursue upgrades; 3) identify available financing (loans, incentives, and tax credits); 4) select a contractor to complete the work; and 5) confirm energy savings. While some residents may be able to navigate this process without significant support, many homeowners are not familiar with the residential retrofit marketplace and will require higher levels of support to ensure that the audit recommendations result in real energy savings.

Accordingly, the City has identified "**information on-ramps**" to initiate this education process as well as web and personal interfaces to guide customers through the retrofit process from start to finish.

- **Technology on-ramps.** Customized home energy reports and web-based tools will allow customers to track their current utility usage and connect to information about solutions, available resources, and qualified contractors (examples include O Power/Positive Energy, EnergySavvy, and Microsoft Hohm). In addition, Seattle is developing a web portal to facilitate communication among customers and contractors and to provide access to utility rebates as well as City and other financing options to enable easy, one-stop shopping.
- **Direct Install Program.** Funded through SCL and formula EECBG funds, this program will reach an estimated 8,000 residents in the targeted district to install compact fluorescent lamps and low-flow showerheads. Installers will provide homeowners with information on the retrofit program and how to participate.
- **Home Energy Performance Audits.** Seattle is partnering with PSE and SCL to implement an 18-month residential energy performance audit and home energy performance rating pilot program. Deeply subsidized audits are offered at \$95. This partnership is expected to fund approximately 2,000 audits in the district.

Service Delivery. The WEB initiative will make \$4 million available for organizations to compete to deliver residential retrofits using a scalable, efficient, sustainable, and community-based approach that will maximize job creation and efficiency gains. These groups will conduct community organizing, audits and consultations, and energy saving retrofits. This model was created and is currently being delivered by **SustainableWorks** in Seattle and Spokane. Other organizations, such as **EOS Alliance** and **Home Performance Washington**, are also ready to deliver such services. Key elements of the SustainableWorks approach include:

- Pre-organizing to identify community institutions to support the mission and establish a strong base of support.
- Community organizing to recruit organizers from every block in the community to engage their neighbors.
- Energy audits and customer consultations to review pre-audit results, answer questions, and schedule audit.
- Direct installation of CFLs and water-saving showerheads and aerators to capture immediate energy savings.
- Review of Energy Performance Score audit results to provide retrofit options and explain financing.
- Energy-saving retrofits performed by qualified contractors employing workers trained in approved programs.
- Follow-up organizing in the community with open houses, events, and meetings to engage more participants.

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

Multifamily Residential Audit and Retrofit Program

For multifamily buildings and residents, the WEB initiative will establish a competitive process making Carbon Incentive Fund dollars available to an energy conservation contractor to implement a three-phase approach:

Conduct Audits, Analysis, and Direct Install

- Free common area audits will be provided to all qualified multifamily buildings in the target district.
- These multifamily buildings will also receive a free energy analysis, including a benchmarking score to show building owners how much energy they use compared to their competitors, an effective motivator for upgrades.
- The audit phase will include direct installation of efficiency measures, such as CFLs and insulation, in units and common areas. Savings of 5-10% from these measures are common.

Target Efficiency Upgrades for Common Areas

- Building on existing PSE and SCL rebates for multifamily weatherization, the successful contractor will utilize Carbon Incentive Fund dollars to stimulate participation in the retrofit program.

Weatherize Individual Units

- The initiative will focus on helping properties address issues that are barriers to efficiency investment, such as removing knob-and-tube wiring, abating asbestos on water pipes, or adding incentives for window replacement.
- The successful contractor will provide technical assistance, installation oversight, and post-construction analysis.

Small Commercial Energy Efficiency Loan Program

The Neighborhood WEB approach to the small business sector will build on an existing program launched in 2009 for small and medium-sized grocery stores and restaurants. The City's Office of Economic Development (OED) will act as an "energy advocate" for the commercial loan program—arranging for an audit, assisting with utility rebates, and identifying the appropriate loan program and amount to accomplish the retrofit.

Loans will be the main tool for delivering retrofit assistance to the Small Commercial sector, as follows:

- OED and its implementation partners will conduct door-to-door outreach to introduce the program; interested businesses will then apply for a loan online.
- Embedded in the application are questions that will direct the loan application to either a Grow America Fund energy efficiency loan officer or SEBC energy efficiency lender. Those loan officers will then arrange for energy efficiency audit and evaluate business for appropriate cash flow to support loan payments.
- GAF and SBEC will structure these loans to be cost-neutral, such that energy savings meet or exceed loan payments.
- OED will coordinate with utility incentive programs and connect businesses to pre-qualified retrofit contractors.
- Upon completion of the retrofit, OED will work with SCL and PSE and WSU to measure energy savings achieved as additional security on the loan.

Large Commercial—Seattle Steam Customer Retrofits

Through its partnership with Seattle Steam Company (SSC), MacDonald-Miller Facility Solutions (MMFS) will conduct projects to address steam distribution and use as well as electricity, gas, and all energy-using mechanical and electrical systems for SSC customers of Seattle Steam. This component of the WEB initiative will expand the existing program, funded in part by the State Energy Program at \$1.5 million, to support implementation of about 25 projects with total capital costs of \$15 million.

- MMFS has completed initial energy analysis of the first set of 72 customer facilities (7.5 million SF), and preliminary energy audits scoping efficiency investment potential are underway.
- MMFS is preparing proposals for energy efficiency retrofits ranging from \$250,000 to \$2 million per facility.

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

- MMFS will provide project and risk management, including coordination with the customer facilities team, savings verification, and ongoing maintenance. Savings performance guarantees also will be provided.

Hospital / Institutional Sector

In Seattle, the majority of healthcare activity is focused on "Pill Hill." This small slice of the targeted district holds four major healthcare institutions: Virginia Mason Medical Center, Swedish's First Hill and Cherry Hill campuses, and King County's Harborview. These four hospitals total roughly 5 million square feet and almost 1,500 hospital beds. Assuming a minimum efficiency gain of 15-25% in each facility, this program could result in carbon emissions reductions in the range of 20,000 metric tons per year.

The WEB initiative will make funds available for healthcare retrofits through the Carbon Incentive Fund. Hospitals may partner with contractors to develop competitive project proposals for Strategic Energy Management Plans and associated retrofits. Both McKinstry and MMFS are prepared to offer interim construction financing for these projects and guide implementation and verification through standard ESCO agreements. Funds will be awarded utilizing a per-ton of carbon reduced methodology and will favor projects that leverage significant private resources.

Municipal Retrofit Program

The City of Seattle has already committed \$500,000 in EECBG formula funds to support complete audits of municipal facilities, and these audits are underway through a contract with *McKinstry Company*. The City will finance these projects through a municipal bond sale, in the amount of \$20-30 million. As part of the WEB initiative, McKinstry will work with the City to buy-down costs of additional, deeper retrofits in identified facilities. Cost of this additional work will be covered with Carbon Incentive Fund dollars so that project payback, through guaranteed energy savings, remains within the 12-year margin required for municipal bond financing.

Monitoring/Verification Plan

Monitoring and verification (M&V) of retrofit results is a key part of delivering cost-effective results, saving energy and reducing greenhouse gas emissions. Effective M&V is designed to increase energy savings, document financial transactions, enhance financing methods by reducing risk, improve engineering design and facility operations, manage energy budgets, and evaluate environmental benefits of energy projects.

This project incorporates a robust plan for monitoring and verifying results and providing real-time feedback on program performance to the City and DOE. We have enlisted energy efficiency evaluation experts from the Washington State University (WSU) Energy Program to lead this effort in close consultation with our partner utilities, SCL and PSE, as well as with DOE. WSU will be responsible for selecting methodologies that strike the right balance between analytical rigor, timely reporting, feasibility, and cost. We will ensure that our methods align with the work of the Efficiency Valuation Organization and the International Protocol for Measurement and Verification Performance.

- For **single-family residential**, **Energy Performance Scores** from a post-retrofit audit will support analysis of efficiency improvements. Participating homeowners will receive a monthly statement showing energy usage so they can track savings. Two partners are prepared to provide this service (O Power and Microsoft Hohm).
- For **multifamily residential** and many **nonresidential buildings**, **Energy Star Portfolio Manager** will monitor energy performance over time. For hospitals, the **Strategic Energy Management Plans** will include recommendations for tracking and for ensuring that energy savings persist over the life of the measure.

WSU will compile and analyze the data, independently assessing program efficacy and results and identifying opportunity areas for improvements. The WSU team brings years of experience with evaluating energy efficiency programs in the Northwest and around the nation.

Strategy for Feedback and Continuous Improvement across All Sectors

Our project management strategy along with the methods for monitoring and verification are structured to provide rapid and ongoing feedback about project results and the performance of retrofits deployed. We will collect energy performance data on a regular, ongoing basis—and in real time for larger projects. WSU will analyze these data and review the findings on a regular basis. WSU will flag concerns as they arise, and the management team will meet

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

regularly to review the results and focus on any problem areas. This approach facilitates adaptive management and continuous improvement of the project, rather than waiting for set intervals to elapse before flagging problems. The management team will look across all six sectors to identify lessons from one sector that can offer suggestions for improvements in other sectors. The WEB initiative is designed to be readily scalable, and we will apply lessons learned as we expand efforts to the whole city (and encourage other jurisdictions to do so) following the grant period.

2.1.2 CLARITY OF PROJECT GOALS AND APPROACH

In the *Goals and Objectives* and *Project Approach* sections above and *Project Plan and Timeline* below, we present a clear set of measurable goals, objectives, tasks, methods, milestones, and deliverables for the project. These will ensure that we track progress and quickly identify and redirect efforts that are not achieving their goals.

This project has been carefully designed to realize the two primary goals and five objectives presented at the outset of this submittal. Our *Project Structure and Capabilities* section explains how we will mobilize our partners to achieve these outcomes. The *Project Plan and Timeline* (Section 3) outlines the major phases of the project as well as key tasks and the milestones we will use to track progress. Finally, the *Project Impact Matrix* sets forth the deliverables we expect to achieve in terms of buildings retrofitted, energy and carbon savings achieved, leverage achieved, jobs created, and program sustainability.

The deliverables and targets set forth are, we believe, ambitious yet achievable. We have designed this program from the ground up – consulting with practitioners and experts in each sector, many with deep experience designing and implementing energy efficiency retrofit programs. Our program includes a mix of high yield, proven strategies, such as using ESCOs and bond financing to retrofit municipal buildings and innovative, game-changing initiatives, such as the Carbon Incentive Fund and Energy Efficiency Service Charge. This mix has been designed with a careful balance of risk and return to ensure that the bottom line outcomes of reduced carbon emissions and green jobs created are achieved and the program can and will be sustained after EECBG funds are expended.

2.1.3 IDENTIFYING AND ADDRESSING BARRIERS

The City has identified three critical barriers to conservation investments in all sectors: access to information, financing and a skilled workforce, consistent with those identified in the Vice President's Middle Class Task Force report *Recovery through Retrofit*.

Addressing the Information Barrier

Opportunities for increasing energy efficiency in existing buildings must be driven by a better understanding of how these buildings perform. Measuring and rating energy performance will help building owners and occupants identify opportunities for efficiency gains and encourage upgrades. Connecting owners to qualified contractors for energy audits and retrofits will reduce confusion in this growing marketplace. Our initiative aims to increase information available to building owners and tenants in all sectors as summarized below.

Tool	How It Addresses the Information Barrier	Sector
Home Energy Reports	Customized to home characteristics and compares with 100 neighbors in similar homes as well as "efficient" neighbors in the top 20%.	Single-Family Residential
Energy Performance Score	Enables homeowners to learn how their homes are performing with respect to energy consumption and carbon impact as well as how to make improvements.	Single-Family Residential
Technology/web portals	A combination of tools under development in the region (Microsoft Hohm, Energy Savvy and the Energy Performance Score Web Portal) to connect homeowners with audit results, energy retrofit contractors and financing options and available incentives.	Single-Family Residential Multifamily Residential

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

Energy Star Portfolio Manager	Provides an objective and standardized way measure and communicate the energy performance of buildings in the U.S. and is rapidly becoming the national standard. (The City Council is scheduled to vote in January 2010 on a requirement for benchmarking and building labeling using Portfolio Manager for certain commercial and multifamily buildings.)	<ul style="list-style-type: none"> • Multifamily • Small Business • Large Commercial • Hospital • Municipal
Investment grade audits and energy performance analysis	Where additional information is needed beyond what Portfolio Manager can supply, these audits and analyses will detail energy performance, opportunity areas for efficiency gains, and results of upgrades made.	<ul style="list-style-type: none"> • Multifamily • Small Business • Large Commercial • Hospital • Municipal

Addressing the Financing Barrier

Lack of access to adequate financing is the single greatest barrier to increased conservation. Our program includes multiple new financing tools that are key components of programs in all sectors:

Tool	How It Addresses the Financing Barrier	Relevant Sectors
Revolving Loan Program with Credit Enhancement	Provides access to capital and is part of a seamless delivery system.	<ul style="list-style-type: none"> • SF Residential • Small Business
Energy Efficiency Service Charge	Eliminates loan process and administration, ensures energy savings year after year, straightforward to implement and leverage.	<ul style="list-style-type: none"> • SF Residential • MF Residential
On-Bill Repayment	Allows owners to see impact of energy savings, ease for repayment and helps with secondary market.	<ul style="list-style-type: none"> • SF Residential • MF Residential • Large Comm.
Carbon Incentive Fund	Ties efficiency investment to carbon reduced to facilitate ease of entry into the coming carbon market and thus a long-term funding stream.	<ul style="list-style-type: none"> • SF Residential • MF Residential • Hospitals
Municipal Bond Financing	Provides low-cost, long-term, patient capital for certain retrofits and engages private capital markets in energy efficiency lending.	<ul style="list-style-type: none"> • SF Residential • MF Residential • Municipal
Energy Service Contracting	Builds on a well-known mechanism in the efficiency market place to utilize efficiency savings as the project repayment stream.	<ul style="list-style-type: none"> • Large Comm. • Hospital • Municipal

Addressing the Workforce Barrier

The lack of a skilled workforce is perhaps the greatest non-technical barrier to the advancement of energy efficiency and renewable energy technologies. The City has been actively involved for the last year in a regional effort to develop energy efficiency training and career pathways. Our workforce development component builds on this leading effort in the following ways:

- Identifies workforce needs and skill gaps related to the types and scale of EECBG retrofit projects.
- Identifies worker pipeline sources, including dislocated workers, graduates from the area's residential weatherization and energy auditor programs, and existing supply of skilled workers.
- Develops curriculum to improve skills of incumbents or train new workers.

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

- Ensures coordinated development and delivery of these training programs to eligible workers.
- Aligns energy efficiency career ladders with the EECBG program so that workers gaining experience from this funding source have future advancement opportunities.
- Establishes standards and testing protocols and provides for certification of trained workers.

2.1.4 COMPLIANCE WITH EXISTING ENVIRONMENTAL, HEALTH & SAFETY LAWS

The City of Seattle has received numerous federal awards and is in compliance with all regulations associated with this project. Preliminary plans for addressing environmental, health and safety, permitting, and compliance issues that may arise during the implementation of this grant are reflected in the *NEPA Summary Table* in *Appendix C*. City staff are well-versed in the regulations triggered by the acceptance of federal funds and have close ties with Washington State Department of Commerce staff who are responsible for directing the statewide implementation of all DOE-funded programs. Commerce staff, in addition to our WSU technical advisors, will be directly involved in the regulatory compliance planning process that will occur if the City is awarded EECBG funds. Our budget accounts for the investment of cross-departmental staff time needed to ensure the highest level of regulatory compliance.

2.2 PARTNERSHIP STRUCTURE AND CAPABILITIES (CRITERION 4)

2.2.1 ORGANIZATIONAL INVOLVEMENT

Under the City of Seattle's leadership, the WEB initiative draws on extensive involvement from a broad range of partners representing public, private, educational, and nongovernmental organizations. The City of Seattle has convened more than 40 key public, private, and nonprofit partners to make the WEB initiative a success both in the next three years and over the long term. We have judiciously identified a dynamic team of innovators and implementers who are ready to begin work and deliver results. As outlined below and described further in *Roles of Participants* (Section 5), our team consists of a large and diverse group of organizations that, together, bring the expertise, people power, commitment, and resources to achieve the program's objectives.

2.2.2 ORGANIZATIONAL ROLES AND RESPONSIBILITIES

Our project plan specifically identifies partners as well the specific commitments each will bring to the effort. We have carefully matched existing organizations and their skills to project needs, tasks, and deliverables.

The City has assembled a **Project Management Team** that consists of senior conservation managers from our two utility partners as well as **Washington State University's** Energy Extension program. The *City of Seattle* will lead and manage the overall project, drawing on its extensive experience delivering successful environmental and economic development programs. Our two utility partners, public *Seattle City Light* and investor-owned *Puget Sound Energy*, will be responsible for directing implementation and service delivery in each of the sectors. Partner organizations, many of whom are listed in section 5, will be contracted to implement the outreach, workplace development, finance, audit, and retrofit activities. WSU will serve as a technical advisor and lead for the monitoring and verification of energy efficiency savings achieved through the retrofits.

In addition we anticipate creating a small **Technical Advisory Group** led by WSU, consisting of experts that will convene to assist with program start-up and initial deployment and provide objective outside review of program performance and suggestions for improvements. Finally, we will convene a **Stakeholder Advisory Group** that will meet regularly to receive status reports on progress, and provide feedback and guidance to the Management Team.

2.2.3 PROJECT TEAM EFFECTIVENESS AND QUALIFICATIONS

The City of Seattle Project Management Team represents some of the most highly qualified and experienced individuals and organizations within the energy conservation field in the Pacific Northwest. Key personnel from the City of Seattle—including the Principal Investigator, **Michael Mann**—have a breadth of experience developing, managing, and implementing community-wide change campaigns that produce compelling results. For example, the

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

City set a goal in 2005 to reduce greenhouse gases 7 percent below 1990 levels by 2012. Just last week, a report measuring 2008 emissions was released showing that the goal was met—4 years ahead of schedule.

Key utility team members collectively have decades of experience managing residential and non-residential conservation programs. Both Seattle City Light and Puget Sound Energy are known for their award-winning and nationally recognized energy efficiency programs. SCL Conservation Director, **Robert Balzar**, led his team to exceed conservation goals by almost 25 percent last year, and SCL's current five-year plan aims to double savings between 2008 and 2012. **Cal Shirley**, Vice President of Energy Efficiency Services at PSE, is also expanding the utility's energy conservation programs with the goal of saving 440 average-megawatts of electricity and 70 million therms of natural gas over the next two decades.

Jacob Fey, our key technical advisor, has served as the Director of the WSU Extension Energy Program for almost ten years. The WSU Energy Program is a national leader and catalyst for creating powerful energy efficiency solutions, and it runs the U.S. Department of Energy's Energy Efficiency/Renewable Energy Information Center.

The City of Seattle brings a long track record of successful collaboration with our utility partners, WSU, and the numerous other partners to this program. Please see the **Resumes** section for more detailed information.

2.3 LEVERAGING AND SUSTAINABILITY (CRITERION 1)

2.3.1 LEVERAGING FUNDS AND ALTERNATIVE REVENUE STREAMS

The WEB initiative employs project delivery and financing approaches that are durable and sustainable over time. Because these programs are built on a long history of conservation and proven program delivery, this influx of funds from DOE will allow us to quickly and easily scale up to achieve critical mass and market transformation. These same funds will establish new, long-term financing options that can be replenished with municipal investment, and leverage over \$175 million in private resources.

- **City-Funded Programs.** The WEB initiative builds upon \$3.5 million in investments that the City has already made through general fund and EECBG formula dollars—**\$2.8 million** of which will directly leverage new funding—to support development of the Energy Performance Score, the Direct Install Program, and other program investments.
- **State-Funded Programs.** Through the State Energy Program, Washington State has allocated **\$4.8 million** dollars for low-income weatherization, **\$2 million** to support a SustainableWorks pilot project in a Seattle neighborhood, **\$1.66 million** to support a retrofit at the SeaFreeze cold storage facility; and **\$1.5 million** for the Seattle Steam/MacDonald-Miller partnership, resulting in over **\$7 million** in direct leverage for the WEB initiative.
- **Utility Incentive Programs.** Seattle City Light and Puget Sound Energy will invest a total of **\$26 million** in rebate dollars to support retrofit projects in target building sectors. In addition, over **\$6 million** in program dollars will benefit SCL and PSE customers in the district.
- **Revolving Loan Program.** Through a recently awarded, competitively bid contract, ShoreBank Enterprise Cascadia (SBEC) is managing two revolving loan programs that will be available to residential and small business owners. The proposed **\$3.9 million** in Retrofit Ramp-Up funds will build on nearly **\$7 million** in existing seed funding and an additional **\$2 million** proposed to the Washington State Energy Program for these two loan programs, to leverage nearly **\$9 million** in existing funding.
- **Credit Enhancement.** The **\$5 million** in proposed credit enhancement dollars will build on **\$2 million** in credit enhancement dollars recently approved through the Washington State Energy Program to leverage an additional **\$23 million** in private investment in residential, small business and large commercial loan programs.
- **Energy Efficiency Service Charge.** During the 3-year grant period, the City will utilize over **\$7 million** in municipal bond revenues to finance single-family retrofits multifamily building upgrades. Upon completion of the grant period the City will evaluate expanding this opportunity to gas and oil-heated units.

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

- **Owner financing.** The WEB anticipates building owners across the 6 vertical sectors will contribute **\$80 million** toward retrofits of their homes, businesses and facilities. This includes **\$20 million** in municipal bond revenues to support retrofits in City-owned facilities.

2.3.2

MARKET TRANSFORMATION AND SUSTAINABILITY

The neighborhood WEB initiative has been designed to achieve long term market transformation by overcoming the barriers to information, finance, and workforce development through social marketing, community organizing, new technology solutions, creative financing structures, and innovative workforce development strategies. In addition, long term sustainability will be achieved through the mechanisms put in place in the first three years to provide funding after EECBG resources are expended. Key elements of the approach to achieve market transformation and sustainability include:

- **Investing in a skilled workforce.** By building on innovative workforce development strategies and successful training partnerships already in place, the project will create a sustainable energy efficiency workforce that is scaled to demand, while also responding to the marketplace that will exist after initial public investments have exited. This new workforce will be trained so that skills match the jobs created; workers are hired out of certified training programs and are paid livable wages.
- **Proven finance models.** The funding structure described in section 2.1 leverages significant private investment, while substantially growing the number of entities involved in energy efficiency finance, jump starts the local carbon market in preparation for a national regulatory structure; and creates opportunities at the municipal level for scalable and sustainable financing. Importantly, these tools are appropriate for localities without access to PACE financing.
- **Energy Efficiency Service Charge.** Because this funding source is financed with municipal bonds, the City can continue, at its discretion, to provide this service after the EECBG funds are expended. This model was originally developed by Equilibrium Resource Management (EqRM) as a private sector initiative. Our proposal involves management by the City in the early years, and looks to involving EqRM and other private vendors in the future to achieve scale.
- **Take-out financing.** In addition to leveraged private and public capital in the primary market, the City intends to "take-out" the residential loans by selling an aggregated, securitized portfolio of loans secured by credit enhancement dollars to private investors in the secondary market. This could happen via a bond sale or private placement. Take-out financing is projected to yield **\$30 million** in year 3, replenishing the revolving loan fund. Take-out financing essential doubles the leverage factor, multiplies the amount of funding available for retrofits and replenishes the revolving loan fund.
- **On-bill repayment.** On-bill repayment **provides loan security** in areas of the country where property assessed financing is not available, thereby allowing fund managers to attract private investment. This tool also provides the most direct link for the consumer between loan or charge payments and utility savings.
- **Jump-starting the carbon market.** The WEB initiative's new Carbon Incentive Funds will create incentives to conduct deep retrofits and secure private investment in energy conservation, while simultaneously tying those gains to carbon reductions. The CIFs will prepare Seattle businesses and utilities for participation in the future carbon market—creating a long-term, sustainable way to foster investment in retrofits and energy savings.
- **Innovative technology solutions.** One of this region's competitive advantages is access to innovative new technology. Seattle will partner with Microsoft, EnergySavvy.com, O Power and others to pilot new energy performance rating, information, and monitoring systems. These tools will serve as information on-ramps to future, deeper retrofits in the rest of the City and surrounding jurisdictions.
- **Recognized building performance scoring systems:** Seattle's lessons learned customizing, marketing, and implementing the EPS will help to inform an industry standard for residential energy performance labeling.
- **A forum for regional information sharing:** City of Seattle staff members are committed to sharing lessons learned with other jurisdictions throughout the State of Washington and beyond.

2.4

PROJECT IMPACT (CRITERION 2)

2.4.1

ECONOMIES OF SCALE AND RISK MITIGATION

For the past decade, the City and its utility partners have moved forcefully and creatively to develop and implement leading-edge energy efficiency programs for single-family, multifamily, commercial, and institutional customers. Today, Seattle is approaching critical mass and sees this EECBG award as vital to accelerating progress, realizing significant economies of scale, and ultimately reaching a tipping point in just a few years where investing in energy efficiency is the norm not the exception.

As a direct result of EECBG funding, economies of scale are expected to occur in 1) **workforce development**—with a broad-based, highly skilled, well-trained, and certified labor pool in place to provide retrofit services throughout the region; 2) **contractor mobilization**—with many companies now in the building trades retooled to deliver energy efficiency services to their customers; 3) **energy efficiency financing**—with the mechanisms in place and engagement of a wide range of financial institutions in this space; and 4) **building owner demand** for energy efficiency services—with a high level of knowledge of and interest in implementing cost-saving, affordable retrofits.

We do not anticipate a significant increase in foreclosures or defaults as a result of this program. For all sectors and all customers, we will adhere to the “pay for itself” principle, offering customers net zero loans where the payment will be equal to or less than the reduction in their energy bill as a result of the retrofit. In addition, the required audit and Home Performance Score will provide the basis for selected energy efficiency measures that provide a high return on investment for the property owner. Finally, property owners who participate in this program and take advantage of one of the financing options offered will be required to hire pre-approved, registered contractors. This measure will protect homeowners against fraud or substandard work.

2.4.2 ENERGY SAVINGS AND EMISSIONS AVOIDED

The *Project Impact Table* included in *Appendix G* details the projected energy saved and emissions avoided resulting from the program. As can be seen, as a direct result of the EECBG grant if awarded, we expect to create or retain over 2,000 jobs in the first 3 years and 3,700 jobs by year 6. We anticipate leveraging every EECBG dollar 7:1 for a total investment in 3 years of just over \$200 million. We project retrofitting 3,700 buildings totaling 18.6 million square feet saving 71,000 metric tons of CO₂. Finally we estimate saving on average 23% energy in retrofitted buildings and achieving a market penetration of over 30% within 3 years.

Reasonableness of Projected Market Penetration, Buildings Retrofitted & Utility Savings

These projections, developed for each sector and then averaged for the entire program, were based on a review of past programs and in close consultation with our implementation partners. These projections are, we believe, both ambitious and eminently achievable.

- For **single-family residential** retrofits, we consulted with experts at SCL, WSU, the Washington Department of Commerce's (WADOC) Energy Office, and SustainableWorks. We assumed that through our marketing, canvassing, and direct outreach efforts, we will reach 80% of qualified homeowners; 40% of qualified homes will receive audits; and that 26% will be weatherized or retrofitted (selecting measures that average in cost from \$3,000 to over \$13,000 and achieve 21 to 41 % energy savings).
- **Multifamily** projections are based on the performance of ongoing PSE programs, which have demonstrated a high level of interest in and adoption of efficiency measures resulting in 10-15% savings at low cost. Based on these results, we project that 33% of property owners targeted will invest in a retrofit, costing on average \$2.63 square foot and saving on average 10-42% on their utility bills.
- For the **small business** program targeting grocers, restaurants, and cold storage, we used projections developed by Seattle's Office of Economic Development (OED) in consultation with SCL and PSE to develop

estimates of savings ranging from 26% to 36%. Through community-based marketing and outreach as well as with incentives and concessionary financing we project that 35% of this marketplace will invest in lighting and refrigeration upgrades, with paybacks of as short as 3-5 years in many cases.

- For the **hospital, municipal, and large commercial** sectors, projections are based on data provided by McKinstry and MacDonald-Miller, based on their intensive experience with these building types. Annual savings of 15-30% are anticipated with a payback of 10-12 years, using EECBG funds leveraged with owner and private capital.

The projections all assume that EECBG monies are leveraged substantially with utility rebates and private funds providing adequate resources for the incentives, contractor services, and financing needed to reach the outcomes.

Projections for performance and outcomes beyond the 3-year EECBG program period are more speculative but are based on our initial best estimates given expected resource availability, anticipated successes in the pilot phase, and the likely adoption of cap and trade or another similar framework that will make investing in energy efficiency even more attractive than it is today. Please note that our forward projections are conservative in that they only consider continuation of the program in the target area with available funds. We did not project outcomes based on likely expansion of the WEB program into other communities both within and outside of Seattle.

2.4.3

EXPANDING TO OTHER COMMUNITIES

Seattle's WEB model was designed for easy replication to other communities. Indeed, many of our regional partners are counting on funding of this Retrofit Ramp-Up effort so that the initiatives can be readily replicated at relatively low start-up cost in their jurisdictions. Core elements of the model that we expect to reach critical mass and/or prove their viability as innovative approaches include: 1) use of *O Power*, *EnergySavvy*, and *Microsoft Hohm* as web-based on-ramps for homeowner retrofits and as highly effective tools for tracking performance and savings; 2) the integration of the Energy Performance Score (EPS) into audit protocols to provide residents with a tool similar to Energy Star for homes and the linkage of EPS to the multiple listing service to enable owners to reflect the value of an energy efficient home in the selling price of their house; 3) the community-based door-to-door outreach model to engage and sign up residential retrofit customers; 4) the utility on-bill payment mechanism as a viable alternative to PACE; 5) the establishment of the Carbon Incentive Fund; 6) city/utility financing and ownership of energy efficiency measures repaid through an energy efficiency service charge; 7) the effectiveness of loan loss reserves and other credit enhancement mechanisms at attracting private investors; 8) take-out financing as highly effective means of providing for program sustainability over time and 9) bringing together community organizations, business and industry associations, social justice advocates, research institutions and the labor community to identify opportunities, engage training and job placement programs, and deliver retrofits.

3. PROJECT PLAN AND TIMETABLE

This section presents our proposed *Work Breakdown Structure* of major tasks, milestones, deliverables, and project phases as well as the *Quarterly Spend Plan*, which depicts how EECBG grant funds and leveraged resources will be applied over the three-year grant period. The *Project Organization* section summarizes key players on our team and their roles; additional information on the team, our partners, their roles, and overall organization appears above in the *Partnership Structure and Capabilities* section 5.

3.1 WORK BREAKDOWN STRUCTURE

The Work Breakdown Structure consists of four phases and five primary tasks. The phases characterize the sequence of efforts and activities over time: I. **Mobilization/Start-up**; II. **Initial Deployment**; III. **Full-scale Implementation**; and IV. **Transition to Sustainability**. The five major tasks—1) **Management**, 2) **Sector Implementation and Finance**, 3) **Workforce Development**, 4) **Marketing and Education**, and 5) **Monitoring and Verification**—cut across these phases. These tasks and associated subtasks are outlined in the table for each quarter based on when they will be implemented. Key milestones and deliverables are discussed below.

Phase I, Mobilization/Start-up will begin with the DOE award to Seattle, even before an agreement is in place, and is expected to last for approximately six months. In this phase, the Project Management Team, supported by staff, will begin work in all task areas. Key deliverables in this phase include:

- Completing a detailed work plan and budget.
- Selecting and contracting with implementation partners through a competitive bidding process.
- Establishing management systems, accounting systems, communication protocols, and sector teams.
- Developing financing mechanisms, the workforce development program, the marketing/education campaign, and the detailed measurement and verification methodologies—ready for initial implementation in Quarter 3 and full-scale implementation thereafter.

Phase II, Initial Deployment, is critical to the success of the program. In this phase, implementation partners overseen by the management team will engage target audiences, soliciting interest and demand for audits and retrofit services. Implementation partners will begin delivery of retrofit services where audits have been completed, such as the municipal facility upgrades, and test many of the innovative strategies at a pilot level. In the financing subtask, the City expects to issue bonds in quarter 3 to raise the funds needed to complete the municipal retrofits and pay for residential retrofits through the City's Energy Efficiency Service Charge pilot effort. At the conclusion of this phase, the goal is to be ready for full-scale implementation. However, the City plans a major check-in and decision point near the end of phase II, where progress will be evaluated and changes made to programs and strategies based on how well they have performed to date.

In **Phase III, Full-Scale Implementation**, partners in each sector will continue outreach and audits but will focus primarily on financing and installing retrofits. To provide the financing, Shorebank, NDC, Seattle Steam and other partners will be arranging for loans for retrofits secured in part by the EECBG credit enhancement funds. Within each sector, partners and certified and trained workers will weatherize buildings, upgrade appliances, replace HVAC systems, and provide other retrofit services as identified through the audits. Partners will also put in place performance monitoring systems to enable data collection to verify outcomes and evaluate program performance.

This work will all be overseen and tracked by the Project Management Team, supported by staff and both a technical and partner advisory team. WSU will play a key role here, providing objective feedback on successes and setbacks and offering recommendations for midcourse corrections and adaptive management.

Finally, in **Phase IV, Transition to Sustainability**, the Project Management Team and implementation partners, while completing the EECBG funded retrofits, will shift attention to transitioning to sustainability. Performance in each sector will be carefully evaluated and decisions made as to where and how to continue the retrofit programs. We expect at this point to expand the program to other communities both within Seattle and in neighboring jurisdictions. Other key activities in this phase include 1) arranging for securitization of loans and take out financing to replenish the loan funds available to building owners for retrofits 2) expanding, if proven successful, the City's initiative to fund building owner retrofits, repaid through the energy efficiency service charge, 3) sharing lessons learned and best practices both regionally and nationally to allow for rapid adoption of Seattle's Neighborhood Web model by others, and 4) preparing a final report documenting all activities, outcomes, and evaluation findings.

Throughout all phases of the program, the Project Management Team will monitor the status of EECBG-funded retrofits in progress and completed as well as jobs created and retained – the key metrics for assessing program performance and outcomes. Milestones, expressed as percent of retrofits completed and expected jobs created, are presented in the Work Breakdown Structure table on the following page.

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

Work Breakdown Structure

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
TASKS		Mobilization /Start-up		Initial Deployment		Full-Scale Implementation				Transition to Sustainability			
MILESTONES	% of EECBG funded retrofits completed				10%		25%		50%		75%		100%
	Number of jobs created				238				1031				2009
1. MANAGEMENT	Detailed project and budget planning			✓									
	Formalize organizational structure & management teams		✓										
	Establish communication protocols		✓										
	Select & contract with service providers/partners			✓									
	Ongoing management and oversight												
2. SECTOR IMPLEMENTATION /FINANCE	Initial Deployment				✓								
	Mobilize sector teams and resources												
	Initial customer outreach												
	Conduct audits												
	Initial pilots/rollouts of innovative strategies												
	Program performance review /adjustment				*		*			*		*	
	Full-scale Implementation												
	Assemble financing & leverage												
4. WORKFORCE DEVELOPMENT	Issue loans for retrofits												
	Securitize loans; arrange take-out financing												
	Establish/expand workforce development program			✓									
	Adopt hiring standards to link training to jobs				✓								
5. MARKETING AND EDUCATION	Provide training and certification					✓					✓		
	Recruit and place workers in jobs												
	Develop marketing plan			✓									
	Conduct initial outreach and awareness building												
6. MONITORING & VERIFICATION /SHARING	Ongoing advertising and marketing												
	Implementation of social marketing strategies												
	Performance reporting to customers												
	Develop M&V methods and protocols			✓									
	Establish DOE-specific performance feedback metrics				✓								
	Performance tracking and analysis												
	Reporting; Lessons learned & sharing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* = Decision Point ✓ = Deliverable

Quarterly Spend Plan

TASKS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	TOTALS
	Mobilization/Start-up		Initial Deployment		Full-Scale Implementation						Transition to Sustainability		
1. MANAGEMENT													
EECBG	50,355	50,355	50,355	50,355	100,710	100,710	100,710	100,710	100,710	100,710	100,710	100,710	\$1007,099
Leverage	0	0	0	0	0	0	0	0	0	0	0	0	\$0
2. SECTOR IMPLEMENTATION / FINANCE													
EECBG	1061395	1061395	1061395	1061395	2,122,790	2,122,790	2,122,790	2,122,790	2,122,790	2,122,790	2,122,790	2,122,790	\$21227,901
Leverage	4,337,309	4,337,309	4,337,309	4,337,309	14,099,730	14,099,730	14,099,730	14,099,730	17,353,870	17,353,870	17,353,870	17,353,870	\$143,613,632
3. WORKFORCE DEVELOPMENT													
EECBG	57,000	57,000	57,000	57,000	114,000	114,000	114,000	114,000	114,000	114,000	114,000	114,000	\$1140,000
Leverage	232,926	232,926	232,926	232,926	757,196	757,196	757,196	757,196	931953	931953	931953	931953	\$7,688,303
4. MARKETING / EDUCATION													
EECBG	41250	41250	41250	41250	82,500	82,500	82,500	82,500	82,500	82,500	82,500	82,500	\$825,000
Leverage	168,565	168,565	168,565	168,565	547,971	547,971	547,971	547,971	674,440	674,440	674,440	674,440	\$5,563,904
5. MONITORING & VERIFICATION & SHARING													
EECBG	40,000	40,000	40,000	40,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	\$800,000
Leverage	163,457	163,457	163,457	163,457	531366	531366	531366	531366	654,002	654,002	654,002	654,002	\$5,395,300
TOTALS	YEAR 1				YEAR 2				YEAR 3				TOTALS
EECBG	\$5,000,000				\$10,000,000				\$10,000,000				\$25,000,000
Leverage	\$19,609,027				\$63,745,052				\$78,457,061				\$161,811,140

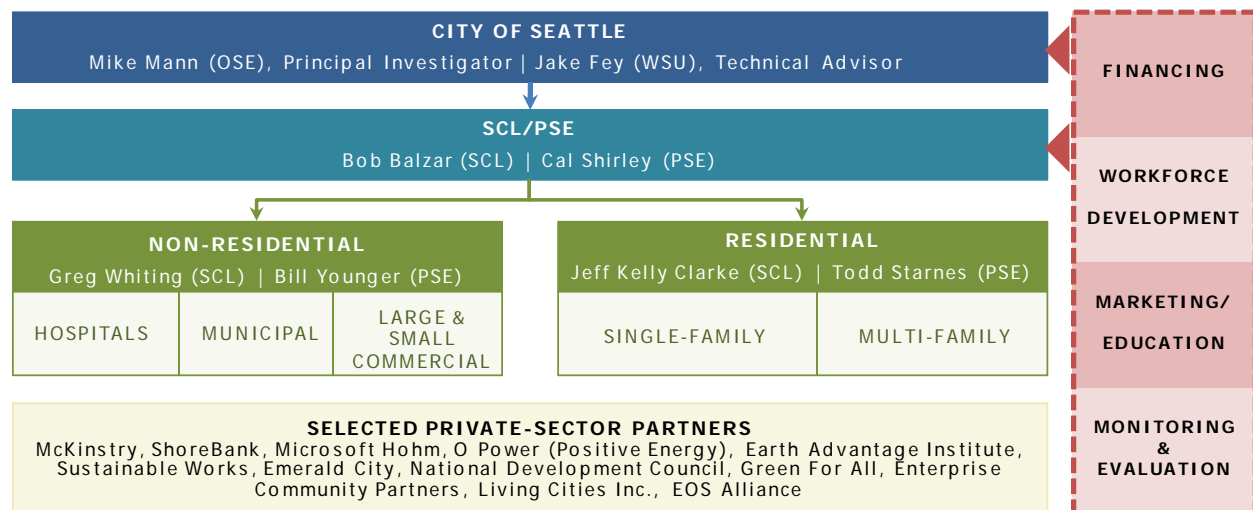
3.2 QUARTERLY SPEND PLAN

The table on the previous page presents the quarterly spend plan for EECBG funds and direct leverage. Spending is aligned with the tasks outlined in the *Work Breakdown Structure*. Our program modeling anticipates spending 20% of EECBG funds in year one and 40% in years 2 and 3 respectively. For directly leveraged funds, we expect to expend 12% in Year 1, 40% in Year 2, and 48% in Year 3.

3.3 PROJECT ORGANIZATION

The City developed the project management and organizational structure for this program in close consultation with partners and by examining how other grant programs of this magnitude have been managed. The proposed organizational structure is presented in the figure below. The City of Seattle will lead this effort. The Project Management Team, consisting of Mike Mann, Jake Fey, Bob Balzar and Cal Shirley will direct the work of the conservation managers from SCL and PSE responsible for non-residential and residential programs respectively. Those managers in turn will be responsible for forming sector teams consisting of implementation partners and a designated leader responsible for coordination, management, and sector level performance. Finally staff and partner leads will be assigned to the cross-cutting functions of financing, workforce development, marketing, and M&V.

This structure is designed to ensure success by 1) fully engaging the utilities as the lead conservation organizations in the project, 2) provide for clear leadership and accountability, 3) provide essential technical input, and 4) engage the partners and stakeholders, who are so essential to achieving outcomes, on an ongoing basis.



4. RELEVANCE AND OUTCOMES/IMPACTS

The City and its partners have painstakingly designed the WEB initiative to comprehensively meet the goals, objectives, and underlying purpose of the EECBG program. Our application creates or retains over 2,000 jobs, garners approximately \$175 million in leverage dollars, realizes 30% penetration of energy efficiency within our target market, saves building owners 15-45% on their energy bills, and eliminates 71,000 mtCO₂e of greenhouse gasses. The EECBG funded effort will also establish a viable, replicable program that demonstrates to other governments, utilities and the private sector *how* to make efficiency the first source for new energy, that pilots a variety of innovative, potentially game-changing, financing, outreach, and workplace development strategies to address the key barriers to implementation. In addition, through the engagement, service delivery and financing mechanisms deployed, WEB provides a durable foundation for market transformation and ongoing, sustainable investment in energy efficiency in this region and beyond.

Importantly, this program has been intentionally designed to reach an unusually diverse community of beneficiaries; we intend to engage *all* populations of Seattle's most diverse district, from immigrants and multifamily tenants, to

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

small business owners, to middle-class families trying to save on their energy bills and do the right thing for the environment, to commercial property managers seeking to ride out the recession, to hospitals striving to reduce operating costs. Finally, the breadth of this effort and the ability of Seattle to involve so many partners—with almost 80 letters of support attached to this application—attests to the value and importance of this initiative to this region. This support provides a powerful start to achieving sustainability and market transformation through these funds.

5. ROLES OF PARTICIPANTS

The City has secured commitments from a wide range of partner organizations to deliver program services, including performing audits and retrofitting buildings. Some of these partners are currently under contract with the City, SCL, and/or PSE. Others will be selected through a competitive bidding process. Still others have offered in-kind services, committed to providing funding to leverage EECBG monies, or both.

The table below lists many of the key organizations that have engaged so far in this effort, volunteering as partners. Each of these entities brings impressive qualifications and capabilities to ensure success for the WEB initiative. Once selected and under contract, the work of these partners will be managed by the Project Management Team and the sector leads, as described in Section 3.3.

Residential Sector (Single-Family and Multifamily) Participants and Roles	
SustainableWorks	Establish a \$1 million credit enhancement program working with credit unions and banks throughout Washington State to arrange for EE loans. \$200,000 of this \$1 million dedicated to WEB initiative.
Microsoft Hohm	Market and provide services for ongoing monitoring of energy savings.
EnergySavvy.com	Connect homeowners with contractors and financing via web resource.
Earth Advantage Institute	Deliver the Energy Performance Score for home audits, construct web interface portal, and provide training.
Enterprise Community Partners	Leverage up to \$2 million to support a pilot financing program for retrofits of multi-family housing.
ECOS	Utilize over 15 years of direct install expertise to provide outreach and direct install services to multifamily sector.
Home Performance Washington	Members—including residential energy professionals and service providers—are prepared to offer energy audit and whole-house retrofit contracting services.
Non-Residential Sector (Small, Large, Hospital/Institutional, and Municipal) Participants and Roles	
ECOSS (Env. Coalition of South Seattle)	Market the small business retrofit program to corner markets and small restaurants throughout the targeted district during the period of the grant
Seattle Steam	Offer on-bill financing to facilitate retrofits for customers in target district.
MacDonald-Miller Facility Solutions	Perform, purchase, and monitor energy efficiency retrofits for Seattle Steam customers in the target district. Commit \$3 million to support program.
SeaFreeze Cold Storage	Leverage \$1.6 M in Washington SEP funding and private leverage for cold storage facility energy efficiency upgrades.
McKinstry Company	Provide audit and retrofit services to Seattle municipal facilities in the target district and supply \$250,000 of in-kind services to support program. .
Green For All & Community Benefits Law Center	Support community engagement process to result in 'high road' hiring and contractor standards.
Cascadia Consulting	Provide outreach to small businesses under existing City contract.

Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

Finance Sector	
ShoreBank Enterprise Cascadia (CDFI)	Manage residential and small business loan programs. Leverage loan dollars at a minimum of 3:1.
National Development Council (CDFI)	Leverage low-cost funds from the Grow America Fund via Small Business Administration guarantee, resulting in below-market financing terms and rates for borrowers. Leverage loan dollars at a minimum of 9:1.
Seattle Northwest Securities	As financial advisor to the city structure sector finance programs and take-out financing.
Workforce Development	
Workforce Development Council of Seattle-King County	Convene and conduct workforce planning process; manage home weatherization and commercial energy efficiency curriculum development (leverage \$8 million in pending Department of Labor Green Job development grants).
LIUNA	Conduct weatherization skills training and work with the City to establish certification and hiring standards.
Puget Sound SAGE	Assisting the City in creating low-income weatherization hiring standards.
Seattle Jobs Initiative (SJI)	Recruit and prepare candidates for job vacancies and provide case management and placement for trained workers upon completion of certified training programs.
Living Cities, Inc.	Provide \$455,000 to support development of an employer-driven workforce intermediary that will increase access to family-supporting jobs for low-income people.
Emerald Cities Partnership	Help Seattle monitor and communicate savings and job creation; broaden the group of stakeholders already assembled in support of this application; provide direct technical assistance and pilot Seattle approach in other cities.

6. ARRA INFORMATION

The Seattle Neighborhood WEB initiative is built on real-world experience that proves it truly is possible to induce economic recovery through investment in energy efficiency retrofits. Current policy and program initiatives have already led to creation of a nationally recognized workforce development approach in the energy efficiency sector.

With funding secured through a grant from Living Cities, Inc., the City of Seattle is partnering with Seattle Jobs Initiative and the Workforce Development Council to fund the Northwest Energy Efficiency Opportunity Project (NEW OP) which will establish residential weatherization curriculum, training and placement services. In addition, NEW OP is the only project in the country to expand these efforts to the commercial energy efficiency sector.

In addition, the City of Seattle has also established high-road hiring standards for its DOE-funded, low-income weatherization program and is poised to expand these standards into other programs.

Seattle's investment in the energy efficiency retrofit industry has already resulted in the following significant achievements: 1) 150 new graduates expected to be trained by June 2010; 2) Over 100 applicants screened and 60 interviewed for new green jobs; 3) 14 workers hired by 4 companies; 5) 100% of new hires qualify as low-income; 6) expected regional demand for new workers over the next six months totals 50 jobs.

The Seattle Neighborhood WEB initiative represents the employment demand driver that the industry has been waiting for: the influx of funding to support the WEB initiative will build on local workforce development initiatives to create **2,000 new, local, green jobs** in Seattle. Because the program will live well beyond the initial three-year grant period, these are jobs that will remain in Seattle, aiding in the long-term economic recovery of this region.